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Financial Inclusion of Young People: Disproportions between the Old and New Member States of the European Union

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Abstract:

Purpose: *The article aims to indicate the size and specificity of the disproportions in the financial inclusion of young people aged 15-24 between the old and new member states of the European Union.*

Design/Methodology/Approach: *The work uses data from the Global Findex Database, which contains the results of a survey conducted in 2017 among households. The dependence between the different degrees of financial inclusion was examined. For this purpose, correlation coefficients were calculated and their significance was checked using t-statistics. The article primarily used statistical analysis of data concerning the degree of financial inclusion as a research method.*

Findings: *Differences in the wealth of the old and new member states of the European Union may partly explain the differences in the degree of inclusion in financial services among young people in these countries, however, this link is not clear. The examples of Slovenia, Estonia, and Latvia indicate that it is possible to effectively promote among young people the use of banks and other formal financial institutions also in relatively less wealthy countries. Both in the group of countries belonging to the European Union and in the group of non-EU high-income countries, a strong correlation was found between the share of young people who have an account and the share of young people collecting savings in a bank or other formal financial institution.*

Practical Implications: *Less affluent countries, which consider increasing inclusion in financial services among young people as an important goal, should also seek solutions in the educational and cultural spheres. That is why the activity of the authorities, financial and educational institutions as well as the media, which promotes having an account and collecting formal savings among young people, is socially desirable.*

Originality/value: *The issue of inclusion in financial services among young people was examined, taking into account the diversity of conditions in the old and new European Union countries, and the results were compared to the situation in high-income countries from different continents that do not belong to the European Union.*

Keywords: *Financial inclusion, young people, personal finances.*

JEL classification: *G21, G51, I22, D12.*

Paper Type: *Research study.*

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1. Introduction

Today's 15-24 year olds are often considered to be a generation that is very skilful in using digital technologies in everyday life. Computers, tablets, and smartphones allow easy and quick access via the Internet to various sources of information and to various services, including financial ones. However, the actual access to both the Internet and financial services, also among young people, is still not the same in all European Union countries (Demirguc-Kunt *et al.,* 2015; Frączek, 2017; Huterski *et al.*, 2020). Despite the gradual changes resulting from the development of the so-called 'FinTech companies', i.e., companies developing the use of new technologies in finance, both in cooperation with banks and, to some extent, by competing with them, the main gateway to access to financial services is still having a bank account.

Even a legal attempt to regulate the dynamic development of FinTech in the form of the EU PSD2 directive of 2015 has not deprived the importance of having an account in a bank (or in a similar formal financial institution) for meeting the payment, credit, and savings needs of the society (Huterski, Huterska, and Polasik, 2018). Moreover, quick access to non-bank, immediate loans with insufficient financial knowledge and skills may lead, especially in the case of young people, to a debt spiral and, consequently, to financial exclusion. This article aims to indicate the size and specificity of the disproportions in the financial inclusion of young people aged 15-24 between the old (EU_old) and new (EU_new) member states of the European Union. The new member states include those that joined the European Union together with its enlargement by ten countries in 2004 and in the following years. Financial inclusion is represented in this article by having a current personal account in a bank and related financial products such as debit card, and savings at a bank or other formal financial institution.

An intuitively associated factor of disproportion in financial inclusion is the level of wealth of the society in a given country and this issue will be discussed in the article (based on data obtained from the World Bank). However, the authors will also pay attention to the potential presence of other factors, specific to individual financial products. The linkages between these products will also be taken into account.

2. Literature Review

Research being carried out on financial inclusion worldwide focuses mainly on households that are unbanked or underbanked. The research in question concerns both the scale of this phenomenon (Demirguc-Kunt *et al.,* 2015; Huterski *et al.,* 2020), its spatial diversity (Demirguc-Kunt *et al.,* 2015; Huterski *et al.,* 2020; Korzeniowska and Huterska, 2020), and factors influencing them (determinants). Determinants belonging to macroeconomic factors are indicated by such research as Demirguc-Kunt *et al.* (2015), Redy (2017), Frączek (2017) examining the level of economic development of the country, or Szneider (2011) focusing on the impact of the size of the shadow economy.

Demand determinants, such as high costs of financial services or the lack of infrastructure, are indicated in their research by Agarwal (2016), Reddy (2017), BIS (2016), Huterski *et al.* 2018. Factors resulting from the individual characteristics of consumers were, in turn, the subject of considerations on the demand determinants of financial exclusion. They included education (Nielsen, 2002; Pikkarainen *et al.*, 2004; Lassar *et al.*, 2005; Lee *et al.*, 2005; Gerrard *et al.*, 2006, Martinez, 2013, Reddy, 2017, Frączek, 2017, Frączek *et al.*, 2017, Polasik *et al.*, 2018), the level of financial knowledge (Agarwal, 2016, Frączek, 2017, Potocki, 2018.), financial habits and lack of awareness (Martinez, 2013, Reddy, 2017; Frączek, 2017, Łukasiewicz, Karpio, and Orłowski, 2018), the level of consumer income (Flavian *et al.*, 2006; Martinez, 2013; Reddy, 2017; Frączek *et al.*, 2017; Potocki, 2018; Polasik *et al.*, 2018), religious and cultural needs and beliefs (BIS, 2016), gender and age of consumers (Martinez, 2013; Frączek, 2017, Reddy, 2017). Financial behaviour, especially in young adulthood or the beginning of professional activity, often affects the financial situation in later life, including the risk of a debt spiral or having a sufficient amount of funds after cessation of financial activity. Many researchers point to a different approach to using financial services offered by the mainstream financial institution, including credit or savings products, depending on belonging to a specific generation (e.g., baby boomers, millennials). Particular attention should be paid to young adults and their financial education. As indicated (Friedline and Rauktis, 2014), young people 'may be the front lines of financial inclusion'.

Financial inclusion in young adulthood is more likely. Also, starting to use banking products such as a savings account in one's youth increases one's chances of staying banked for the rest of life. However, reckless use of loan and credit products may lead to excessive indebtedness in young adulthood and result in financial exclusion or remaining outside mainstream banking. Therefore, research on financial literacy is important, which indicates that the acquisition of appropriate financial habits, especially by young people, can contribute both to increasing the scale of financial inclusion and to preventing financial exclusion of older adults. It is influenced not only by the financial knowledge gained in the course of school education, but also by financial skills and habits acquired from the family home or acquired through education, also informal.

3. Data and Research Methods

The study analysed the degree of use by people aged 15 to 24 of banking products such as an account in a banking institution, a debit card in a financial institution, and savings in a financial institution. The analysis used data obtained from the Global Findex Database, which contains the results of a survey conducted among households in 2017. Statistical analysis of data on the degree of financial inclusion was applied as a research method.

A preliminary analysis of the relationship between the shares of respondents using specific types of financial services was also carried out. For the dependency between

the variables, correlation coefficients were calculated and their significance was checked using t-statistics (1):

$$t = \frac{r_{xy}}{\sqrt{1-r_{xy}^2}}\sqrt{n-2} \quad (1)$$

because of a small sample (Sobczyk, 1997, p. 253; Piłatowska, 2006, p. 103).

On the correlations described in Table 1 and Table 2, the t-statistics prove that all calculated correlations for variables are statistically significant (i.e., the null hypothesis about the irrelevance of the correlation coefficient at the sig¬nificance level of a=0.05 is rejected).

Table 1. *Correlation coefficients high income non European Union countrie*

	Account	Debit_card	Saving
Account	1.0000	0.8634	0.8357
Debit_card		1.0000	0.7170
Saving			1.0000

Note: *Correlation coefficients, using the observations 1–19, 5% critical value (two-tailed) = 0. 4555 for n= 19.*
Source: *Own calculation using Gretl software*.

The analysis of the correlation between the discussed variables in the group of high-income countries not belonging to the European Union showed a strong positive correlation between the share of account holders and the share of persons having a debit card and savings in a financial institution.

Table 2. *Correlation coefficients European Union countries*

	Account	Debit_card	Saving
Account	1.0000	0.9560	0.8676
Debit_card		1.0000	0.8684
Saving			1.0000

Note: *Correlation coefficients, using the observations 1–28, 5% critical value (two-tailed) = 0. 3739 for n= 28.*
Source: *Own calculation using Gretl software*.

In the countries belonging to the European Union, there is a very strong positive correlation between the share of people holding an account and the share of persons having a debit card and savings in a financial institution. Taking into account the above dependencies, the further part of the paper presents the differentiation of the degree of inclusion in financial services in the European Union member states compared to high-income countries outside the EU.

3.1 An Account in a Bank or Other Formal Financial Institution

Having an account in a financial institution is still a prerequisite for people wishing to avail of various, not only basic financial services. Admittedly, there are services provided by FinTech companies. However, their popularity is still limited. Moreover, FinTechs focus mainly on payment services and, so far, the issuing of debit and credit cards has been dominated by classical financial institutions, especially banks. The activity of granting credits or accepting deposits is legally assigned only to banks and other formal financial institutions.

The data on the prevalence of having an account in a financial institution by people aged 15-24 from different countries available in the Findex database show that according to the most recent data available from 2017, the differences between the 13 new EU countries (EU_new) and the 15 old countries EU (EU_old) as well as non-EU high income countries (non-EU_HI) are still clearly visible. This is evidenced by both the arithmetic average (66.3%) and the median (62.6%) for the EU_new countries, compared to the corresponding data for the EU_old (84.9% and 92.6% respectively) and non-EU high income countries (80.2% and 86.7% respectively). Data from the Findex database concern both accounts held individually and those held jointly with another person (a family member, life partner), which may be particularly important in relation to people from the analysed age group, i.e., young people representing the 15-24 age group.

Table 3. *Statistics for financial inclusion with reference to persons having an account in a bank or other formal financial institution (%)*

Group	n	Sd	25%	Me	75%	Min	Max	skew	kurtosis	Se
EU_new	13	66.3	51.1	62.6	75.7	41.2	100.0	0.6	-0.9	20.1
EU_old	15	84.9	74.9	92.6	98.1	49.1	100.0	-1.0	-0.1	16.1
EU_ALL	28	76.3	61.4	77.6	95.9	41.2	100.0	-0.3	-1.4	20.1
non-EU_HI	19	80.2	68.8	86.7	92.8	44.1	100.0	-0.6	-0.6	16.8

Source: *Own calculation using Gretl software.*

In all groups of countries, there were countries where 100% of respondents had an account in a financial institution. Also, the lowest level of this indicator in all groups was at a similar level, exceeding 40%, while in the old EU countries the lowest level was about 8 percentage points higher and amounted to as much as 49.07% in the case of Greece. The lowest average (66.3%) and the median (62.63%) were found in the group of the new EU members. It should be noted, however, that only in this group we had to deal with right-sided asymmetry, i.e., in this group there were countries where the indicator had a high value and overstated the average (more than half of the countries were above the average).

In the remaining groups, more than half of the countries had an indicator above the average calculated for the group, i.e., there were countries in the group with low

values and those below the average.

Among the EU_old countries, the highest percentage of people that declared the fact of having an account in a financial institution in the 15-24 age group can be found in Denmark, Finland, and the Netherlands (100%). However, Sweden (99%) and Germany (97%) are also very close to this level. A clear outsider among the EU_old countries is Greece (49%), because for the next countries with the lowest percentage of young people that declare having an account in a financial institution, i.e., Italy (64%) and Spain (65%), this percentage is clearly higher, interestingly, close to the median and the average for the EU_new countries.

The EU_new country where the highest percentage of respondents (i.e., 100%, the only such a case among countries within this group) declared having an account in a financial institution is Slovenia. This country shares a border with two EU_old countries, namely Austria (94%) and Italy (64%), which makes this result even more interesting. However, apart from Malta (97%) and Estonia (92%), subsequent EU_new countries have significantly lower percentages of account holders among young people (Latvia 76% and Cyprus 73%). At the same time, among the EU_new countries, the Czech Republic (only 41%) is at the opposite extreme, followed by Bulgaria (43%) and Croatia (47%), as well as Romania (51%) and Slovakia (55%).

High-income countries that are not part of the EU (non-EU_HI) are a highly diversified group. On the one hand, there are as many as three countries (Australia, Canada, and Norway) with a percentage of youth account holders of 100%. On the other hand, however, the countries with the lowest percentage do little better than in the EU_new group, and these are Uruguay (44%), Saudi Arabia (54%), the United Arab Emirates (58%), Trinidad and Tobago (67%), and Bahrain (67%). There are three Arab oil producing countries in this group. The impact on a lower score than would be expected from wealthy countries such as Saudi Arabia and the United Arab Emirates may be due to the religious and cultural position of women in these societies, which limits their independent use of financial services.

In Bahrain and Kuwait, i.e., Arab countries, where women have greater freedom when compared to Saudi Arabia or the United Arab Emirates, the percentage of young people who have an account with a financial institution is as high as 67% and 70%, respectively. Due to the above-mentioned relationship between having an account in a financial institution and the possibility of using savings financial services, this factor may, to some extent, affect the results for the remaining financial services examined.

3.2 Debit Card Ownership

A debit card for a personal current bank account is an important instrument that increases the freedom of disposal of the funds held by the account holder. The usefulness of a debit card is not only a tool for withdrawing cash from ATMs or

making payments at stationary retail and service outlets, but also an instrument that allows online payments for online purchases. For young people, this seems to be particularly attractive, especially considering the limitations in access to physical facilities, as in the case of the COVID-19 pandemic. An additional advantage of a debit card is the possibility of using the current account overdraft facility, i.e., making expenses on credit, exceeding the balance of own funds on the account.

However, such a possibility is not automatically and universally available to all holders of debit cards, as it depends on the conditions of using the account and the card included in the agreement between the client and the bank maintaining his account. Since the bank's granting a customer the right to the current account overdraft facility and the maximum amount of this overdraft usually depends on the amount of funds flowing through that account over a given period, young customers aged 15-24 are generally not eligible for a significant overdraft right.

Table 4. *Statistics for financial inclusion with reference to debit card ownership (%)*

Group	n	Sd	25%	Me	75%	min	max	Skew	kurtosis	Se
EU_new	13	59.2	44.1	52.5	74.7	31.8	97.5	0.8	-0.7	21.0
EU_old	15	76.2	61.7	80.4	93.6	37.5	100.0	-0.5	-0.8	20.4
EU_ALL	28	68.3	49.5	65.7	87.3	31.8	100.0	0.0	-1.4	22.0
non-EU_HI	19	66.5	54.8	66.5	79.6	35.4	99.4	0.0	-0.6	18.6

Source: *Own calculation using Gretl software.*

Only in the group of the old EU countries there were countries where 100% of respondents had a debit card. The country with the lowest percentage of respondents holding a debit card, with less than 32%, is Croatia - one of the new EU member states. The lowest average (59.2%) and the median (52.47%) were found in the group of the new EU member states. In turn, both the highest average (79.17%) and the median (80.35%) could be found in the old EU countries. The median for the entire EU was at a level similar to that of high-income countries excluding EU countries, but the differentiation between the countries in the second and third quantiles was greater in the Union as a whole.

Findex data mainly concern debit cards held by one person, but also include cases where when respondents do not confirm that they have or share a current personal account, but confirm that they have a debit card. In the 15-24 age category, this may apply to cases of actual (not necessarily fully legal) use of a debit card assigned, for example, to someone from the family, or an additional and specially designed for financially dependent people, held as an additional one to someone else's account. Therefore, the survey includes an additional question - ‘Is this (local terminology for ATM/debit card) connected to an account with your name on it?’.

When analysing the data on the popularity of debit cards among young people in

different countries, it ought to be noted that the differences between countries may result both from the same factors that determine the differences in the popularity of having a bank account, and from the diversity of the usefulness of debit cards in individual countries.

The reasons for this differentiation may be, for example, the range of bank offers, the universality of accepting card payments in a given economy, or even the continued popularity of cheques in some countries. In the first case, in the group of the EU_new countries, the same four countries (i.e., Slovenia, Malta, Estonia, and Latvia), and in the same order, have both the highest share of account holders in a financial institution and debit card holders among people aged 15-24. Cyprus has only fifth place in the account category, and Hungary in the debit card category. The five countries with the lowest share of both account and debit card holders are the Czech Republic, Bulgaria, Croatia, Romania, and Slovakia, with the only difference that Croatia is switching position with the Czech Republic on the debit cards ranking. A similar scale of convergence between the lists of countries, and even their order in the account category and debit card category, occurs in the EU_old countries group, however, unlike in the EU_new, four countries appear identically in both categories on the lowest positions of the list (i.e., Greece, Italy, Spain, and France).

In the group of non-EU_HI countries, the convergence of the country system in both categories is definitely smaller. This is natural as 'non-EU_HI' is a more heterogeneous group, including countries from different continents, with more diverse banking systems and payment habits, with different popularity of debit cards in relation to cheques.

3.3 Saved at the Bank or Other Formal Financial Institution

In all groups of countries, there were countries with a low percentage of people saving in a financial institution - not exceeding 5%, and in the case of the new EU countries - 7%. Adolescents are much less likely to save in the EU_new countries (the average amounted to 23%, and the maximum reached 58% in Malta) than in the EU_old (the average amounted to 40%, and the maximum reached 70% in Sweden) and non-EU_HI (the average amounted to 39%, and the maximum reached 75% in Norway). It is characteristic that in all three groups of countries, the young are the least saving in the countries with the lowest per capita income in a given group, i.e., in Bulgaria (EU_new, 6%), Greece (EU_old, 4%) and Uruguay (non-EU_HI, 8%).

However, a cautious approach should be taken with regard to the linkages between GDP per capita and propensity to save. Among the five EU_old countries with the lowest share of youth savers are also France (25%), Ireland (24%) and Italy (17%). The societies of these countries are much more prosperous than those in the post-socialist countries of the EU_new group with a high share of youth saving, such as Lithuania (24%), Slovenia (33%) and Estonia (42%). Moreover, Lithuania has a

level of GDP per capita very similar to that of Greece, but the difference between these countries in the share of saving youth is significant (24% and 4% respectively).

It should be noted that the data relate not only to savings accumulated on one's own account, but also to savings made using an account at a bank or other formal financial institution belonging to another person (e.g., parents, other relatives). The data do not include savings collected using informal savings group/club or a person outside the family.

Table 5. *Statistics for financial inclusion with reference to money saved in the bank or other formal financial institution (%)*

Group	n	Sd	25%	Me	75%	min	max	Skew	kurtosis	Se
EU_new	13	23.0	13.2	18.3	31.0	6.4	58.4	1.3	1.6	14.7
EU_old	15	40.4	25.0	41.7	49.5	4.1	69.8	-0.1	-0.5	19.1
EU_ALL	28	32.2	17.1	28.0	45.4	4.1	69.8	0.5	-0.7	19.0
non-EU_HI	19	39.0	23.3	34.7	56.9	8.1	75.0	0.0	-1.4	20.5

Source: *Own calculation using Gretl software.*

At the same time, it should not be implied that the data refer to saving in the sense of regularly excluding some amount of money from current spending. The respondents answered the following question: 'In the PAST 12 MONTHS, have you, personally, saved or set aside ANY money ...?'. Especially in the studied age group of 15-24 years, the question posed in this way is appropriate, since very few people at this age have their own sources of stable and sufficiently high income to be able to save regularly.

The readiness to have an account in a bank or other formal financial institution, as well as a debit card, seems to be less dependent on the volatility of the economic situation and the financial situation of society than the willingness to accumulate savings in such institutions. However, it is not possible to verify this deductive, intuitive assumption with the data available in the Global Findex. Anyway, given the results of various studies on the lifecycle model of consumption and saving taking into account the business cycle (Browning and Crossley, 2001), a cautious approach should be taken when generalizing conclusions from data on saving (and borrowing) in different countries.

The tendency to save may be significantly influenced by cultural factors of linguistic and geographical nature (i.e., habits of Roman versus German societies; see: Guin, 2009), and in relation to youth, also by differences between generations (i.e., Boomers, X, Millenials, Y, Z; see: McCrindle, 2014). At the same time, intergenerational changes may take place in different countries at different times, and the globalization and popularization of the Internet, so far, have limited reducing impact on this type of differences (Rahman and Tomlinson, 2018).

To recap, the propensity to save among young people aged 15-24 in individual countries should be treated as the result of various factors such as wealth, economic situation, cultural habits, and lifestyle of particular generations (and perhaps other factors as well).

4. Discussion and Conclusions

Several important conclusions of a different nature follow from the above considerations. The new member states of the European Union (EU_new) as a group show a lower degree of inclusion in financial services among young people aged 15-24 in terms of declared account, debit card and savings when compared to the group of countries that had belonged to the EU already before May 2004 (EU_old). This is indicated by the average and median values for these groups of countries in relation to all financial products analysed. However, the EU_new group turns out to be highly diversified and this is not only due to the fact that Malta and Cyprus are the only countries in this group that have not passed through the era of real socialism. High levels of inclusion in financial services are present in Slovenia and Estonia, and the distance between them and the weakest EU_new countries in this area, i.e., Bulgaria, Croatia, and Romania, is significant for each of the five financial products examined.

Among the countries of the EU_old group, attention should be paid to the low level of banking services in southern European countries, i.e., Greece, Italy, and Spain, compared to northern countries such as the Netherlands, Finland, Denmark, and Sweden. However, the disproportions among the EU_old countries are not as strong as among the EU_new countries. The exception is Greece, which clearly stands out from other EU_old countries and has a banking services level comparable to that of Bulgaria or Romania.

The above comments indicate that although the differences in the wealth of the EU_old and EU_new countries may partly explain the differences in the degree of inclusion in financial services among young people in these countries, however, this link is not clear. The examples of Slovenia, Estonia, and Latvia indicate that it is possible to effectively promote the use of banks and other formal financial institutions among young people also in relatively less wealthy countries. Therefore, less affluent countries, which consider increasing inclusion in financial services among the young as an important goal, should also seek solutions in the educational and cultural spheres.

The values given in the tables for the group of high-income countries that do not belong to the European Union (non-EU_HI) are of reference character and in terms of average values they show clear similarities to the group of EU_old countries, however, there are already noticeable differences in terms of medians. This may also result in a weaker than in the group of all EU countries (EU_ALL) correlation between the share of respondents who have an account and the share of respondents

using other financial products, especially between the share of young people who have an account and the share of young people who have a debit card.

The composition of the group of non-EU_HI countries is pretty diversified in terms of the characteristics of banking systems, as it includes countries from Europe (e.g., Norway, Switzerland), both Americas (e.g., USA, Canada, Uruguay), Asia (e.g., Israel, Saudi Arabia, Japan) as well as Australia and New Zealand. Compared to the group of non-EU_HI countries, the EU_ALL countries constitute a group that is much more homogeneous in terms of the functioning of financial systems, even despite the above-mentioned internal differences. The influence of European integration and the use of the euro by 19 of the then 28 European Union countries (including the United Kingdom belonging to the EU until February 2020) is not without significance here.

The authors consider the strong correlation between the share of young people who have an account and the share of young people who make savings in a bank or other formal financial institution to be the most important conclusion from the research. This correlation is very similar in the EU_ALL countries (0.87) and in the non-EU_HI countries (0.84). However, in both groups the variation in the propensity of young people to save between countries is significant. In the group of EU_ALL countries it ranges from 70% in Sweden and 68% in Denmark, to only 6% in Bulgaria and 4% in Greece, and in the group of non-EU_HI countries it ranges from 75% in Norway and 61% in Taiwan, to only 11% in Saudi Arabia and 8% in Uruguay.

Having an account allows young people to develop proper financial habits, the ability to rationally manage their budget and to collect savings. This is extremely important in a situation where young people show a need for credit products later in their lives. Along with the financial transactions made with the use of the account, the young client builds his creditworthiness. Moreover, the bank gets to know the client well, and the client gets to know the bank and its financial products, which in the future gives such a person greater financial flexibility in response to new life challenges. That is why activities of authorities, financial and educational institutions as well as the media, which promote having own account and collecting formalised savings among young people, is socially desirable.

References:

Agarwal, T. 2016. Twin Pillars of Indian Banking: Financial Literacy and Financial Inclusion. SIES Journal of Management, 12(2), 3-12.

Bank for International Settlements, Committee on Payments and Market Infrastructures, 2016. Payment aspects of financial inclusion. Retrieved from: http://www.bis.org/cpmi/publ/d144.pdf/.

Browning, M., Crossley, T.F. 2001. The Life-Cycle Model of Consumption and Saving, The Institute for Fiscal Studies, WP01/15.

Demirguc-Kunt, A., Klapper, L., Singer, D., Van Oudheusden, P. 2015. The Global Findex Database 2014: Measuring Financial Inclusion around the World. World Bank Policy Research Working Paper, 7255, Washington. Retrieved from: http://www.worldbank.org/globalfindex.

Flavian, C., Guinaliu, M., Torres, E. 2006. How bricks-and-mortar attributes affect online banking adoption. International Journal of Bank Marketing, 24(6), 406-423.

Frączek, B. 2017. Edukacja finansowa jako determinanta wzrostu włączenia finansowego. Podejście zintegrowane, Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach, Katowice.

Frączek, B., Bobenič Hintošová, A., Bačová, M., Siviček, T. 2017. Simultaneous use of the financial literacy level and the financial inclusion degree as a result of financial education efficiency in Visegrad Group countries. Journal of Economics and Management, 27(1), 5-25. DOI: https://doi.org/10.22367/jem.2017.27.01.

Friedline, T., Rauktis, M. 2014. Young people are the front lines of financial inclusion: A review of 45 years of research. Journal of Consumer Affairs, 48(3), 535-602. https://doi.org/10.1111/joca.12050.

Gerrard, P. Cunningham, J.B., Devlin, J.F. 2006. Why consumers are not using internet banking: a qualitative study. Journal of Services Marketing, 20(3), 160-168.

Guin, B. 2017. Culture and household saving, EBC Working Paper Series, No 2069.

Honohan, P. 2005. Measuring Microfinance Access: Building on Existing Cross-Country Data. World Bank Policy Research Working Paper, 3606, 1-31. Retrieved from: https://openknowledge.worldbank.org/handle/10986/8941.

Huterski, R., Huterska, A., Polasik, M. 2018. Payment account with basic features and its significance in the reduction of financial exclusion in Poland. Ekonomia i Prawo. Economics and Law, 17(2), 137-155. doi: 10.12775/EiP.2018.010.

Huterski, R., Huterska, A., Łapińska, J., Zdunek-Rosa, E. 2020. The problem of savings exclusion and gross savings in the new European Union member states. Enterpreneurship and Sustanible Issue, 7(3), 2470-2480. doi:10.9770/jesi.2020.7.3(67).

Korzeniowska, A., Huterska, A. 2020. Saving inclusion in the European Union countries - trends and differences. Proceedings of the 35th International Business Information Management Association Conference (IBIMA), 1-2 April 2020, Seville, Spain. ISBN: 978-0-9998551-4-1, Education Excellence and Innovation Management: A 2025 Vision to Sustain Economic Development during Global Challenges, Editor Khalid S. Soliman, 12, 9844-9854.

Lassar, W.M., Manolis, C., Lassar, S.S. 2005. The relationship between consumer innovativeness, personal characteristics, and online banking adoption. International Journal of Bank Marketing, 23(2), 176-199.

Lee, E.K., Kwon, K.N., Schumann, D.W. 2005. Segmenting the non-adopter category in the diffusion of internet banking. International Journal of Bank Marketing, 23(5), 414-437.

Łukasiewicz, P., Karpio, K., Orłowski, A. 2018. Two-component structure of household income distributions in Poland. Equilibrium. Quarterly Journal of Economics and Economic Policy, 13(4), 603-622. https://doi.org/10.24136/eq.2018.029.

Martinez, C.H., Hidalgo, X.P., Tuesta, D. 2013. Demand Factors that Influence Financial Inclusion in Mexico: Analaysis of Barriers based on the ENIF Survey. BBVA Bank, BBVA Research Working Paper, WP/13/37, 1-19. Mexico City.

McCrindle. 2014. The A B C of X Y Z. Understanding the global generations, A McCrindle Publication.

Nielsen, J.F. 2002. Internet technology and customer linking in Nordic banking. International Journal of Service Industry Management, 13(5), 475-495.

Pikkarainen, T., Pikkarainen, K., Karjaluoto, H., Pahn, S. 2004. Consumer acceptance of online banking: an extension of the technology acceptance model. Internet Research, 14(3), 224-235.

Piłatowska, M. 2006. Repetytorium ze statystyki. Warszawa, Wydawnictwo Naukowe PWN.

Polasik, M., Huterska, A., Meler, A. 2018. Wpływ edukacji formalnej na włączenie finansowe w zakresie usług płatniczych, e-Mentor, 1(73), 30-40. doi: 10.15219/em73.1336.

Potocki, T. 2018. Determinanty wyborów finansowych gospodarstw domowych o niskich dochodach, Wydawnictwo Uniwersytetu Rzeszowskiego, Rzeszów.

Rahman, F., Tomlinson, D. 2018. Cross countries. International comparisons of intergenerational trends. Resolution Foundation. Intergenerational Commission intergencommission.org.

Reddy, C.V. 2017. Overall Financial Inclusion Across 55 Countries: 12 Financial Inclusion Enabling Variables. SCMS Journal of Indian Management, 14(1), 14-29.

Schneider, F. 2011. The shadow economy in Europe, 2011: Using electronic payment systems to combat the shadow economy, A.T. Kearney, Johannes Kepler University of Linz; Retrieved from: https://www.atkearney.com/documents/10192/1743816/The+Shadow+Economy+in+Europe+2013.pdf.

Sobczyk, M. 1997. Statystyka, Warszawa, Wydawnictwo Naukowe PWN.

The World Bank. 2017.The Global Findex database 2017 Retrieved from https://globalfindex.worldbank.org/#about_focus .

World Bank national accounts data, and OECD National Accounts data files (https://data.worldbank.org/indicator/NY.GDP.PCAP.CD).